

# INVESTIGATOR'S ANNUAL REPORT

## National Park Service

All or some of the information provided may be available to the public

<b>Reporting Year:</b> 1991	<b>Park:</b> Aniakchak NM & PRES
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<b>Name:</b> MR.WILLIAM CAMERON	<b>Phone:</b>
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<b>Permit #:</b> ANIA1991AAJO	
<b>Park-assigned Study Id. #:</b> unknown	
<b>Study Title:</b> Limnological Studies of Surprise Lake	
<b>Permit Start Date:</b> Jan 01, 1998	<b>Permit End Date:</b> Jan 01, 1998
<b>Study Start Date:</b> Jan 01, 1998	<b>Study End Date:</b> Jan 01, 1998
<b>Study Status:</b> Completed	
<b>Activity Type:</b> Other	
<b>Objectives:</b> A. CONDUCT A LIMNOLOGICAL SURVEY OF THE LAKE AND INLET AND OUTLET STREAMS. B. DEVELOP A LONGTERM LIMNOLOGICAL MONITORING PROGRAM FOR THE PARK.	
<b>Findings and Status:</b> IN THE VICINITY OF INLET STRAMS AND SPRINGS INFLUENCED BY HYDROTHERMAL FLUIDS, THE NEAR LAKE SURFACE INCREASED IN TEMPERATURE, CONDUCTIVITY, TRACE ELEMENTS AND PERIOPHYTON BIOMASS, AND DECREASED IN PH AND DISSOLVED OXYGEN. FOR THE WHOLE LAKE, SECCHI DISK CLARITY, WATER QUALITY AND TRACE ELEMENT CONCENTRATIONSS WERE INFLUENCED TO A LESSER DEGREE BY HYDROTHERMAL INPUTS. BRIGHT ORANGE PRECIPITATES FROM THE HYTROTHERMAL FLUIDS CHANGED THE LAKE COLOR TO OLIVE GREEN IN EARLY SMMER. THE PHYTOPLANKTO COMMUNITY INCLUDED 22 TAXA DOMINATED NUMERICALLY BY CYANOBACTERIA. THE ZOOPLANKTON COMMUNITY INCLUDED 3 CRUSTACEAN SPECIES AND 9 ROTIFER SPECIES. SOME ZOOPLAKTON TAXA WERE AT THEIR HIGHEST DENSSITTES IN EITHER EARLY OR LATE SUMMER, WWHEREAS OTHERS REACHED PEAK DENSSITIES WHEN SECCHI DISK CLARITY AND CHLOROPHYLL CONCENTRATIONS WERE INCREASING IN MID-SUMMER. THE BOTTOM FAUNA WAS DOMINATED BY OLIGOCHAETES NEAR THE MOUTHSS OF HYDROTHERMALLY INFLUENCED STREAMS AND SPRINGS. OLIGOCHHAETES AND STICTOCHINONOMOOUS DOMINATED LITTORAL AREAS NEAR COLD SPRINGS AND STREAMS. MID-DEPTH ONES IN THE LAKE WERE DOMINATED BY SPHAERIDS AND OLIGOCHAETES, WHEREAS THE DEEP LAKE WAS DOMINATED BY SSPHAERIDS AND CHIRONOMID PUPAE.	
<b>For this study, where one or more specimens collected and removed from the park but not destroyed during analyses?</b> No	
<b>Funding provided this reporting year by NPS:</b>	<b>Funding provided this reporting year by other sources:</b>

0	0
<b>Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college</b>	
<b>Full name of college or university:</b>	<b>Annual funding provided by NPS to university or college this reporting year:</b> 0
<p><b>Paperwork Reduction Act Statement:</b> A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information form is estimated to average 1.38 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3130 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.</p> <p><b>Privacy Act Notice:</b> Scientific research, education and collecting activities within units of the National Park System that may impact parks invoke a permitting and reporting requirement per regulations at 36 CFR 1.6 (Permits), 36 CFR 2.1 (Preservation of Natural, Cultural and Archeological Resources), and 36 CFR 2.5 (Research Specimens). The National Park Service collects information about permit applicants and permittees to administer and document research, collecting, and reporting activities within parks. The information disclosed on this form is required and may result in denial of permit applications if not provided.</p>	